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Ambuja Bhardwaj Assistant Professor, Department

of Physiotherapy, RIMT University, Punjab, India

#### Amritpal Kaur

Student, Students of Physical Education and Sports Sciences, RIMT University, Punjab, India

#### Corresponding Author: Ambuja Bhardwaj Assistant Professor, Department of Physiotherapy, RIMT University, Punjab, India

# Prevalence of neck pain among university students undertaking long distance bus travel

# Ambuja Bhardwaj and Amritpal Kaur

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#### Abstract

Neck pain causes a great personal uneasiness due to disability, pain, reducing work productivity and poor quality of life. Neck pain is commonly among adults and contributes significantly to the demand for medical services and the economic load of absence from work due to illness. Population-based studies indicated an occurrence of between 12 and 34%. Neck pain is expected to be a multifactorial condition, and therefore there are several risk factors causal to its development. Risk factors can be work-related or non-work-related, and they can be alienated roughly into 3 categories physical, psychosocial, and individual risk factors. The physical factors can be explained by the supply of physical load on the musculoskeletal skeleton (Faiza Jabba *et al.*, 2022) <sup>[2]</sup>.

Keywords: Neck pain, neck disability index, bus travel, reducing work

#### Introduction

Neck pain is problem in any of the structures in the neck. These include the muscles, nerves, bones (vertebrae), joints, and the discs stuck between the bones. Neck pain is the most familiar musculoskeletal disorder worldwide with an annual incidence rate of 42 to 67% among young adult. Though its precise aetiology is unknown, it is considered diverse in its origin, and researches show strong connection with depression, anxiety, migraine, inactive life style, sleep disturbances and smoking. It includes both physical risk factors, including extended sedentary or labour or high expectations; and inappropriate workstation designs etc. and bio psychological risk factors such as stress, anxiety and depression. Female gender, having a history of neck problems, having an eye-level monitoring posture and recurrent muscular strain feelings, has all established to induce discomfort. Apparent muscle tension has the biggest effect on pain in the neck. (Faiza Jabba *et al.*, 2022)<sup>[2]</sup>

Neck pain is very collective in the general population. Every individual would have knowledgeable neck pain at some point in their life. Some asset have had acute and some with chronic. Chronic neck pain drops range of motion and limits the functional capacity of neck. Due to of chronic neck pain, neck muscles undergo spasm and gets tiredness soon. This leads to changed head and neck posture. Hence there is a need to find what feature or feature in the chronic neck pain lead to altered posture. Study group involved of 30 subjects with chronic neck pain and control group with 30 pain free individuals in the age group between 20 to 30 years. Spearman connection revealed that there was a high level of significance among ROM & pain with significance level of 0.05 and between posture & ROM with significance level of 0.01. Findings from this study presented that there was a significant difference between chronic neck pain patients and pain free subjects in frontal plane arrangement, upper and lower cervical angle. There was a meaning between ROM, posture and pain. Postural changes in the neck need to be measured during therapeutic intervention of patients with chronic neck pain. (Mohankumar *et al.*, 2017)<sup>[3]</sup>.

# Methodology

**Procedure:** 100 students were contacted for the present study, out of these, 40 male and 60 female were randomly selected for the present study collection of data.

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The questionnaire was developed and used for the collection of data. The questionnaire comprises of 29 questions related neck pain. The responds gave on the basis of options. The questionnaire was answered during students sitting in bus. Collection of data is from students of RIMT University who travel by bus on daily basis.

# **Inclusion criteria**

# Subjects should meet these criteria should meet in the study

- From age 18-25 years.
- University bus students.
- Both males and females.

Students with travelling distance more than 30kms and travelling time more than one hour.

# **Exclusion criteria**

# Following subjects were not included

- Non-cooperative subjects.
- . University hosteller students.
- Students with travelling distance less than 30kms and travelling time less than one hour.
- Students travelling through own transport.

# Results





Graph 1: Shows the mean and SD of the age in the sample





Graph 2: Shows the no of males and females in the sample ~ 304 ~

Table 3: The list of questions asked from students regarding neck pain who travel in bus on daily basis

Sr. No.	Details of questions
1.	Do you travel by bus on daily basis
2.	Do you have neck pain or not?
3.	Pain intensity
4.	Lifting
5.	Reading
6.	Headache
7.	Concentration
8.	Work
9.	Driving
10.	Sleep
11.	Recreational activities
12.	Personal care
13.	Do you think that you have neck pain because of long distance travelling in bus?
14.	What is the aggravating factor of your neck pain?
15.	What are the relieving factors of your neck pain?
16.	How many hours do you spend on your device for studying in bus?
17.	Do you hold your device in one or both hands when you using it in bus?
18	Do you think that neck pain is related to the use of your mobile phone in bus?
19.	How many hours do you spend on your device for studying in bus?
20.	Do you hold your device in one or both hands when you using it in bus?
21.	On a scale of 1 to 10 how severe your neck pain during bus driving?(If 0-No pain 10-Worse pain)
22	What is the most frequent position when you travel in bus?
23	Do you think that bus travel affect your posture also?
24.	How would you describe the type of pain
25.	Where specifically on your neck do you feel the pain?
26.	What are the relieving factors of your neck pain?
27.	Have you experienced any stiffness or limited range of motion in your neck after bus travel?
28.	Have you sought any treatment or remedies for your bus related neck pain?
29.	Are there any other factors or activities that worsen your neck pain during bus travel?

### Discussion

This study has been conducted to find out prevalence of neck pain among University students travelling by bus on regular basis. 100 students were taken as sample it shows that out of 100 students 40% are males and 60% are females. Prevalence of neck pain increases with age and that it is more collective in women. Moreover, neck pain is more prevalent among lower socioeconomic status groups, those performing repetitive, static work or physically demanding work, those with previous neck trauma, and among those suffering from comorbid conditions such as depression, low back pain and headache. Neck pain is one of the most common musculoskeletal disorders worldwide, with a reported 12month prevalence ranging from 42 to 67% in young adults.

#### Conclusion

Neck pain is one of the major musculoskeletal disorders in the adult population this condition has a complex aetiology including numbers of factors like heavy physical bustle, use of force and vibration, inadequate posture, repetitive movement, behavioural and psychosocial. Some studies shows associates between neck pain and associated factors. This study has stated that 64% universities students of RIMT University have neck pain due to routinely travel by bus. Neck pain is more common in younger adults and can caused by different causes, one of them is bus travel routinely.

Future Scope: Further studies can be undertaken to analyse effect of long bus travel on back pain, cognition, concentration and attentiveness in students.

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